Invasion of *Lythrum salicaria* (purple loosestrife) at the Olentangy River Wetland Research Park in 1998

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Lythrum salicaria (purple loosestrife) is an invasive wetland plant from Europe that has taken over marshes of Eastern North America including the St. Lawrence and the Hudson River valleys, and now many freshwater coastal marshes of the Laurentian Great Lakes (Stuckey, 1980; Balogh and Bookhout, 1989). Its extent is now well into the Ohio River Basin and the plant is commonly seen in central Ohio.

We have been watching for this invasive plant at the Olentangy River Wetland Research Park (ORWRP) since wetlands were constructed at the site in 1994. Until 1998, the plant was not found at the site.

On July 11, 1998, a well-developed clump of the plant, about 2-m tall, was spotted with well-developed flowering at two locations at the southern edge of the ORWRP. It was found along the swale draining the experimental wetlands (swale & stream in Fig. 1). The location closest to ARC Industries back parking lot had 7 plant stalks (see Fig. 1).

At the next meeting of ORWRP researchers involved in site research, a discussion was held as to what adaptive management, if any, we should undertake for *Lythrum salicaria*. One the one hand, a self-design approach (Mitsch et al., 1998) suggests that, for the most part, nature is in charge and we should not remove any plants or animals. On the other hand, there was concern expressed that the ORWRP could then serve as a source for *L. salicaria* for other wetlands in central Ohio. The decision was made to take the plant out.

A survey of the ORWRP showed the plant growing at three locations in or near the swale draining the two experimental wetlands, at one location near the inflow of the mitigation wetland (billabong), and one location in experimental Wetland 1 20 m NE of its outflow (Fig. 1). All plants were found and removed manually over the period July 13-20, 1998. The plant was taken out by covering the top of the plant with a plastic bag to minimize seed release followed by cutting and bagging of aboveground biomass. Roots were then dug out as well as possible. All were disposed of off site in plastic bags.

The location of the plants suggested two sources of the plant. It was found in greatest abundance at the southern tip of the site near the ARC industry parking lot suggesting that it came from school buses or other vehicles that frequently come and go from the ARC Industries parking lot. The large number of plants (7 in one location) suggest that it probably entered the site in 1997 but was not spotted that year. Its minor presence near the inflow of the billabong suggests that seeds for purple loosestrife are also in the Olentangy River and entered the billabong when the river was flooding the billabong in the spring of 1998. The plant was not found in either of the experimental marshes.

References

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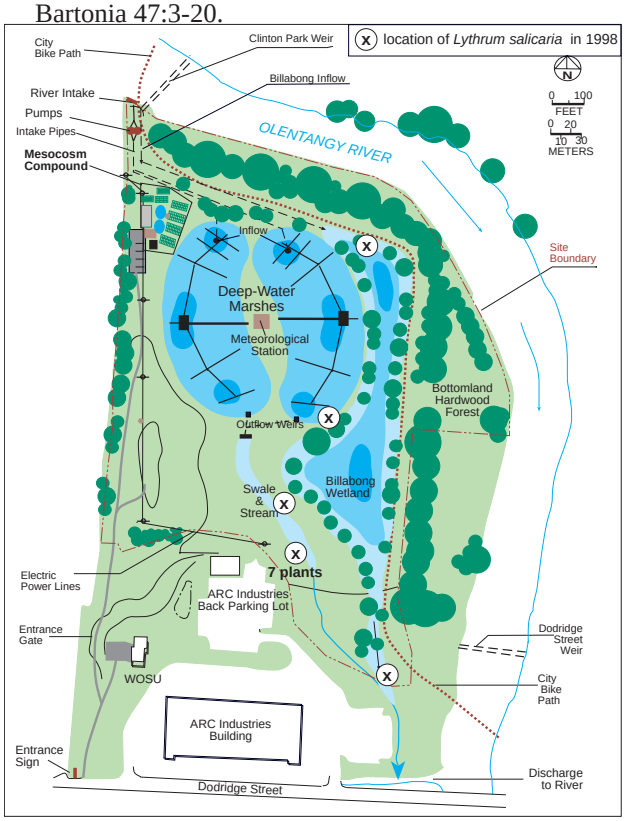

Figure 1. Location of *Lythrum salicaria* (purple loostrife) plants at the ORWRP in 1998. Plants were removed as soon as they were found in July 1998.